PROGRAM

MONDAY, March 26—7:00 PM

SESSION 1  KEYNOTE SESSION

Introduction by: Navdeep Chandel, Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA

**Metabolic stress and genomic instability**

Tak W. Mak [35'+10']

Presenter affiliation: Princess Margaret Cancer Centre, Toronto, Canada.

Introduction by: Shimin Zhao, Fudan University, Shanghai, China

**AMPK as a glucose sensor and biological implications**

Sheng-Cai Lin [35'+10']

Presenter affiliation: Xiamen University, Xiamen, China.

TUESDAY, March 27—9:00 AM

SESSION 2  METABOLIC CONTROL OF IMMUNITY

Chairperson: Hozumi Motohashi, Tohoku University, Sendai, Japan

**Fueling T cell subsets and differentiation in immunity and cancer**

Jeffrey Rathmell [20'+10']

Presenter affiliation: Vanderbilt University Medical Center, Nashville, Tennessee.

**Novel therapeutic strategies to treat NASH driven HCC**

Saskia Reibe, Mark A. Febbraio [20'+10']

Presenter affiliation: Garvan Institute of Medical Research, Diabetes & Metabolism Division, Sydney, Australia.
Impact of hyperactivation of the NRF2 antioxidant pathway in lung cancer on immune surveillance
Anastasia-maria Zavitsanou, Ray Pillai, Ellitza Ivanova, Thales Papagiannakopoulos, Sergei B. Koralov [10'+5']
Presenter affiliation: NYU School of Medicine, New York, New York.

Cancer cell-derived metabolites and IL-6 promotes MDSC, TAM, PD-1 expression in peripheral blood mononuclear cells
Lechuang Chen, Rui Chen, Akina Tamaki, Chad Zender, Thomas McIntyre, Ge Jin [10'+5']
Presenter affiliation: Case Western Reserve University, Cleveland, Ohio.

Coffee / Tea Break

Cancer immunotherapy by PD-1 blockage
Tasuku Honjo [35'+10']
Presenter affiliation: Kyoto University, Graduate School of Medicine, Kyoto, Japan; Kyoto University, Graduate School of Medicine, Kyoto, Japan.

TUESDAY, March 27—2:00 PM

SESSION 3 POSTER SESSION

Vitamin K2 prevents lymphoma in Drosophila melanogaster
Maytham Dragh, Fengsen Duan, Zhiiliang Xu, Huiyuan Lu, Huageng Liang, Xiaotong Li, Ling Hong
Presenter affiliation: Huazhong University of Science and Technology, Wuhan, China.

Combined modulation of ANLN and KDR transits triple negative breast cancers to the luminal A subtype
Jia Li, Xiaofeng Dai, Yi Mei, Zhonghu Bai
Presenter affiliation: JiangNan University, Wuxi, China.

Impairment of cell metabolism by Baeckea frutescens for elimination of cancer cells
Shazwin Hani Shahruzaman, Mohd Fazirul Mustapha, Sharida Fakurazi, Sandra Maniam
Presenter affiliation: Universiti Putra Malaysia, Serdang, Malaysia.
Combination chemotherapy induces cancer cell death through induction of Bnip3 and ROS
Kuang-Hui Sun, Ling-Yen Chung
Presenter affiliation: National Yang-Ming University, Taipei, Taiwan; Taipei City Hospital, Taipei, Taiwan.

Interaction between NAT2 metabolic rate and red meat intake on the risk of colorectal cancer
Hansong Wang, Motoki Iwasaki, Christopher A. Haiman, Suminori Kono, Lynne R. Wilkens, Temitope O. Keku, Sonja I. Berndt, Shoichiro Tsugane, Loïc Le Marchand
Presenter affiliation: University of Hawaii Cancer Center, Honolulu, Hawaii.

Role of retinol dehydrogenase 10 (Rdh10) in regulating adipogenesis and lipid metabolism.
Di Yang, Joseph L. Napoli
Presenter affiliation: University of California, Berkeley, Berkeley, California.

Schisandra chinensis extract decreases chloroacetaldehyde production in rats and attenuates cyclophosphamide toxicity in liver, kidney and brain
Jianxiu Zhai, Feng Zhang, Shouhong Gao, Li Chen, Ge Feng, Jun Yin, Wansheng Chen
Presenter affiliation: Shenyang Pharmaceutical University, Shenyang, China; Changzheng Hospital, Second Military Medical University, Shanghai, China.

TUESDAY, March 27—4:30 PM
Chinese Tea & Beer Tasting

TUESDAY, March 27—7:00 PM

SESSION 4 ORGANISMAL METABOLISM

Chairperson: Hongyuan (Rob) Yang, University of New South Wales, Sydney, Australia

Janelle Ayers [20'+10']
Presenter affiliation: The Salk Institute for Biological Studies, La Jolla, California.
New insights into insulin resistance
David E. James [20'+10']
Presenter affiliation: University of Sydney, Sydney, Australia. 15

Metabolic reprogramming by ERα regulates liver tumor initiating cells and hepatic tumorigenesis
Chien-Yu Chen, Yang Li, Jingyu Chen, Lina He, Peter Dervan, Bangyan L. Stiles [10'+5']
Presenter affiliation: University of Southern California, Los Angeles, California. 16

Targeting lipid metabolism with a metabolic inhibitor cocktail eradicates peritoneal metastases of ovarian cancer
David W. Chan, Rain R. Chen, Hextan Y. Ngan [10'+5']
Presenter affiliation: The University of Hong Kong, Hong Kong. 17

Metabolically regulated posttranscriptional events in the control of immune cell function
Erika Pearce [20'+10']
Presenter affiliation: Max Planck Institute of Immunobiology and Epigenetics, Freiburg, Germany.

Free Open Bar
Sponsored by BioBAY

WEDNESDAY, March 28—9:00 AM

SESSION 5  METABOLIC STRESS

Chairperson: Brendan Manning, Harvard T.H. Chan School of Public Health, Boston, Massachusetts, USA.

Polo-like kinase 1 coordinates biosynthesis during cell cycle progression by directly activating pentose phosphate pathway
Xiaoyu Ma, Huafeng Zhang [20'+10']
Presenter affiliation: University of Science and Technology of China, Hefei, China. 18
Fuel and oil for the cancer engine
Arkaitz Carracedo [20'+10']
Presenter affiliation: CIC bioGUNE, Derio, Spain; CIBERONC, Madrid, Spain; Ikerbasque, Bilbao, Spain; University of the Basque Country, Leioa.

Rewired lipid metabolism drives metastasis in Ras-driven tumors.
Shuxi Qiao, Devika Salunke, Varunika Vivekanandan, Clary B. Clish, Marcia C. Haigis, Nabeel Bardeesy, Leif W. Ellisen [10'+5']
Presenter affiliation: Massachusetts General Hospital, Boston, Massachusetts; Harvard Medical School, Boston, Massachusetts.

Inhibition of intracellular lipolysis by hypoxia inducible gene 2 (HIG2) promotes cancer cell adaptation to hypoxia
Xiaodong Zhang, Jun Liu [10'+5']
Presenter affiliation: Mayo Clinic College of Medicine, Scottsdale, Arizona.

Coffee / Tea Break

Aminoacylation in insulin signaling regulation
Shimin Zhao [20'+10']
Presenter affiliation: Fudan University, Shanghai, China.

AMPK—Cancer fighter, cancer supporter
Reuben J. Shaw [20'+10']
Presenter affiliation: Salk Institute for Biological Studies, La Jolla, California.

Characterisation of mTOR signalling using 3rd generation inhibitor
Guang Yang, Deanne Francis, David E. James [10'+5']
Presenter affiliation: The University of Sydney, Sydney, Australia.

WEDNESDAY, March 28—1:30 PM
Visit to Old Suzhou
SESSION 6  CANCER METABOLISM IN VIVO

Chairperson:  Reuben Shaw, Salk Institute for Biological Studies, La Jolla, California, USA

Lactate-induced cell signaling in hypoxia responses and cancer
Dong Chul Lee, Young IL Yeom  [20'+10']
Presenter affiliation: Korea Research Institute of Bioscience & Biotechnology (KRIIBB), Daejeon, South Korea.

Diet, metabolism, and cancer
Jing Chen  [20'+10']
Presenter affiliation: Emory University, Atlanta, Georgia.

Investigating cancer cell metabolism using genetically encoded fluorescent sensors
Yi Yang  [20'+10']
Presenter affiliation: East China University of Science and Technology, Shanghai, China; Institutes of Neurosciences, CAS, Shanghai, China.

Metabolic regulation of preimplantation mouse embryo development
Fangtao Chi  [10'+5']
Presenter affiliation: University of California, Los Angeles, Los Angeles, California.

Allee effect in cancer—Metabolic cooperation between malignant cells to overcome starvation
Gizem Guzelsoy, Spencer Hobson-Gutierrez, Logan Schachtner, Craig B. Thompson, Joao B. Xavier, Carlos Carmona-Fontaine  [10'+5']
Presenter affiliation: NYU Center for Genomics & Systems Biology, New York, New York.
SESSION 7  METABOLIC PATHWAYS

Chairperson:  Shimin Zhao, Fudan University, Shanghai, China

Metabolic regulation of cell state
Heather Christofk  [20'+10']
Presenter affiliation: University of California-Los Angeles, Los Angeles, California. 29

PTEN family in cancer and metabolism
Yuxin Yin  [20'+10']
Presenter affiliation: Peking University Health Science Center, Beijing, China. 30

Genome-wide CRISPR/Cas9 screening identified the critical roles of serine biosynthesis pathway in tyrosine kinase inhibitor resistance in liver cancer
Larry Wei Lai, Derek Lee, Dicky Cheuk-Ting Law, Irene Oi-Lin Ng, Chun-Ming Wong, Carmen Chak-Lui Wong  [10'+5']
Presenter affiliation: The University of Hong Kong, Hong Kong, China. 31

Targeting serine and one-carbon metabolism in metastatic breast cancer
Jiangbin Ye, Albert M. Li, Gregory S. Ducker, Yang Li, Joshua D. Rabinowitz, Craig B. Thompson  [10'+5']
Presenter affiliation: Stanford University, Stanford, California. 32

Coffee / Tea Break

Arginine methylation of MDH1 by CARM1 inhibits glutamine metabolism and suppresses pancreatic cancer
Qun-Ying Lei  [20'+10']
Presenter affiliation: Fudan University, Shanghai, China. 33

Mitochondria control cancer and immunity
Navdeep Chandel  [20'+10']
Presenter affiliation: Northwestern University, Chicago, Illinois. 34

Targeting glutamine as a "semi-essential" amino acid in cancer
Alex Bott, Wei-Xing Zong  [10'+5']
Presenter affiliation: Rutgers University, Piscataway, New Jersey. 35
ATP-citrate lyase contributes to melanoma growth and MAPK inhibitors resistance by epigenetically regulating MITF and oxidative phosphorylation
Weinan Guo, Jinyuan Ma, Sen Guo, Shiyu Wang, Tianwen Gao, Chunying Li
Presenter affiliation: Fourth Military Medical University, Xijing Hospital, Xi'an, China.

THURSDAY, March 29—2:00 PM

SESSION 8 REDOX BIOLOGY

Chairperson: Heather Christofk, University of California, Los Angeles, Los Angeles, California, USA

Metabolic features of NRF2-addicted cancer cells
Hozumi Motohashi, Tomoaki Ida, Md. Morshedul Alam, Hiroshi Kitamura, Takaaki Akaike
Presenter affiliation: Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan.

Uncovering metabolic bottlenecks in lung cancer
Thales Papagiannakopoulos
Presenter affiliation: NYU Medical School, New York, New York.

Investigating metabolism- and redox-based mechanisms in anticancer drug sensitivity/resistance
Elie Hatem, Nadine El Banna, Tiantian He, Amélie Heneman-Masurel, Dorothée Baillie, Vanessa Masson, Florent Dingli, Damarys Loew, Laurence Vernis, Meng-Er Huang
Presenter affiliation: Institut Curie, CNRS, Université Paris-Saclay, Orsay, France.

The estrogen-related receptor ERRα is a ROS sensor and protects DNA against oxidative stress
Mathieu Vernier, Shawn McGuirk, David Papadopoli, Guillaume Bourmeau, Étienne Audet-Walsh, Julie St-Pierre, Vincent Giguère
Presenter affiliation: McGill University, Montréal, Canada.

Coffee / Tea Break
Sulfur respiration in mammals and its implication for tumor biology
Takaaki Akaike, Tomoaki Ida, Md. Morshedul Alam, Akira Nishimura,
Masanobu Morita, Tetsuro Matsunaga, Hozumi Motohashi [20'+10']
Presenter affiliation: Tohoku University Graduate School of Medical Science, Sendai, Japan. 41

Cysteine dioxygenase is a metabolic liability for non-small cell lung cancers
Gina DeNicola [20'+10']
Presenter affiliation: Moffitt Cancer Center, Tampa, Florida. 42

THURSDAY, March 29—6:00 PM
COCKTAILS and BANQUET

FRIDAY, March 30—9:00 AM

SESSION 9 SIGNALING AND METABOLISM

Chairperson: Jing Chen, Emory University School of Medicine, Atlanta, Georgia, USA

The PI3K-mTOR network and control of anabolic metabolism
Brendan D. Manning [20'+10']
Presenter affiliation: Harvard T.H. Chan School of Public Health, Boston, Massachusetts. 43

Sirt3 SUMOylation regulates mitochondrial metabolism
Jinke Cheng [20'+10']
Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China. 44

Epstein Barr-virus encoded LMP1 reprograms glucose metabolism to drive cell motility through effect on mTORC2/PDHE1α mediated histone H3 acetylation
Jun Zhang, Weitao Lin, Chi Man Tsang, Tengfei Liu, Wing Chung Tang, Yim Ling Yip, Wen Deng, Lin Jia, Sai Wah Tsao [10'+5']
Presenter affiliation: The University of Hong Kong, Hong Kong, China. 45
Making new connection between TOR, autophagy, and metabolism
Hong-Wen Tang, Yanhui Hu, Chiao-Lin Chen, Leonard Rabinow, Norbert Perrimon [10'+5']
Presenter affiliation: Harvard Medical School, Boston, Massachusetts. 46

Coffee / Tea Break

Soluble adenylyl cyclase regulates the Warburg phenotype by redirecting the metabolic fate of glucose-6-phosphate
Jung-Chin Chang, Eduardo H. Gilgioni, Simei Go, Arthur J. Verhoeven, Ronald P. Oude Elferink [10'+5']
Presenter affiliation: Academic Medical Center, University of Amsterdam, Amsterdam, the Netherlands. 47

The role of lysosomal membrane lipids in mTORC1 signalling and autophagic flux
Hongyuan Yang, Jia-Wei Wu [20'+10']
Presenter affiliation: UNSW, Sydney, Australia. 48